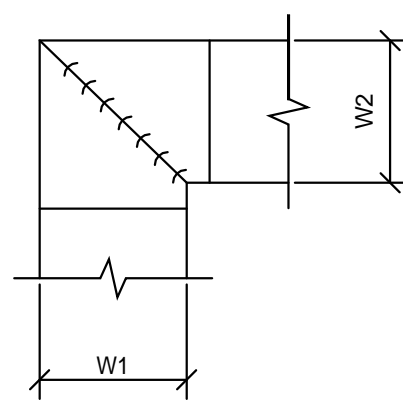
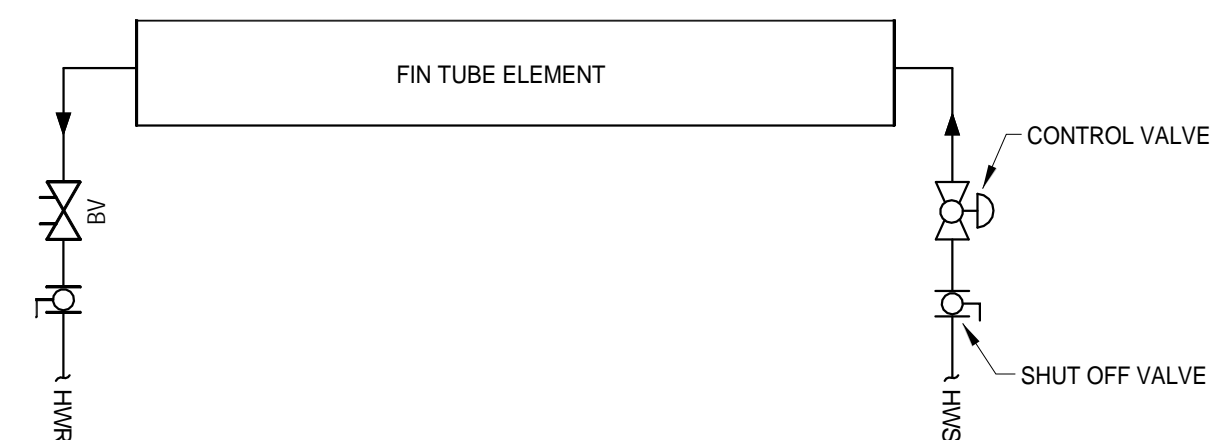


7 SUPPLY DUCT TAKEOFF - AIR TERMINAL UNITS  
N.T.S.

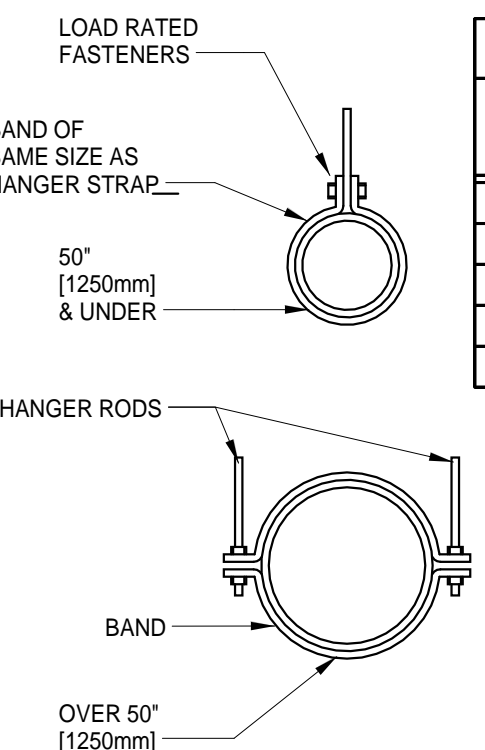


- NOTE:**
1. ALL VANE ELBOWS SHALL BE CONSTRUCTED AND INSTALLED AS DETAILED BY SMACNA.
  2. WHEN W1 DOES NOT EQUAL W2, VANE SHALL BE SINGLE THICKNESS VANE TYPE REGARDLESS OF W DIMENSION.
  3. ALL SINGLE THICKNESS VANES SHALL HAVE A 2" [50MM] RADIUS, 1 1/2" [40MM] MAXIMUM SPACE BETWEEN VANES AND A 3/4" [20MM] TRAILING EDGE.
  4. WHEN W EQUALS W2 AND W1 IS GREATER THAN 20" [500MM] VANES SHALL BE DOUBLE VANE TYPE.

8 DUCTWORK SQUARE VANE ELBOWS  
N.T.S.



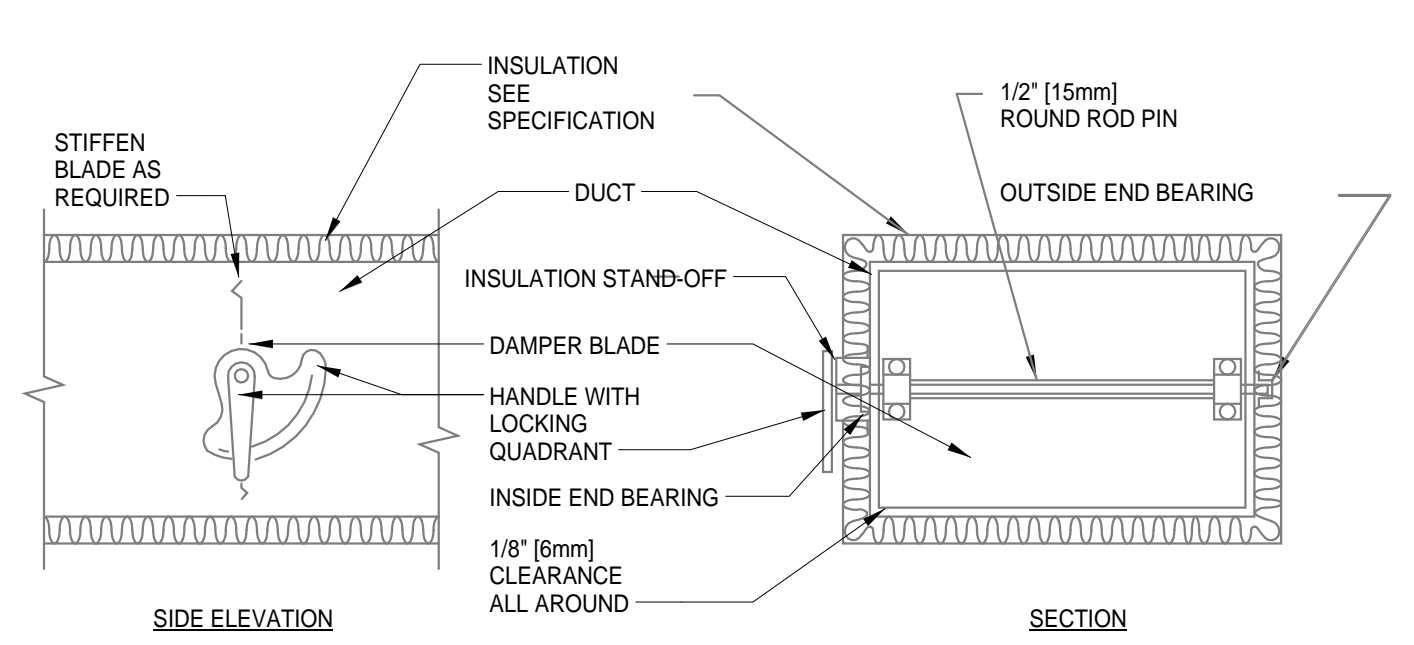
9 FIN TUBE ELEMENT - PIPING CONNECTIONS  
N.T.S.



HANGER STRAPS OR RODS			
MAX. DUCT IN. [mm]	QUANTITY/SIZE IN. [mm]	MAX. LOAD LBS. [kg]	MAX. SPACING IN. [mm]
26 [650]	ONE 1 [25] x 22 GA STRAP	260 [115]	144 [3600]
36 [900]	ONE 1 [25] x 18 GA STRAP	420 [190]	144 [3600]
50 [1250]	ONE 1 [25] x 16 GA STRAP	700 [317]	144 [3600]
60 [1500]	TWO 3/8 [10] RODS	1320 [598]	144 [3600]
84 [2100]	TWO 1/2 [13] RODS	2500 [1133]	144 [3600]

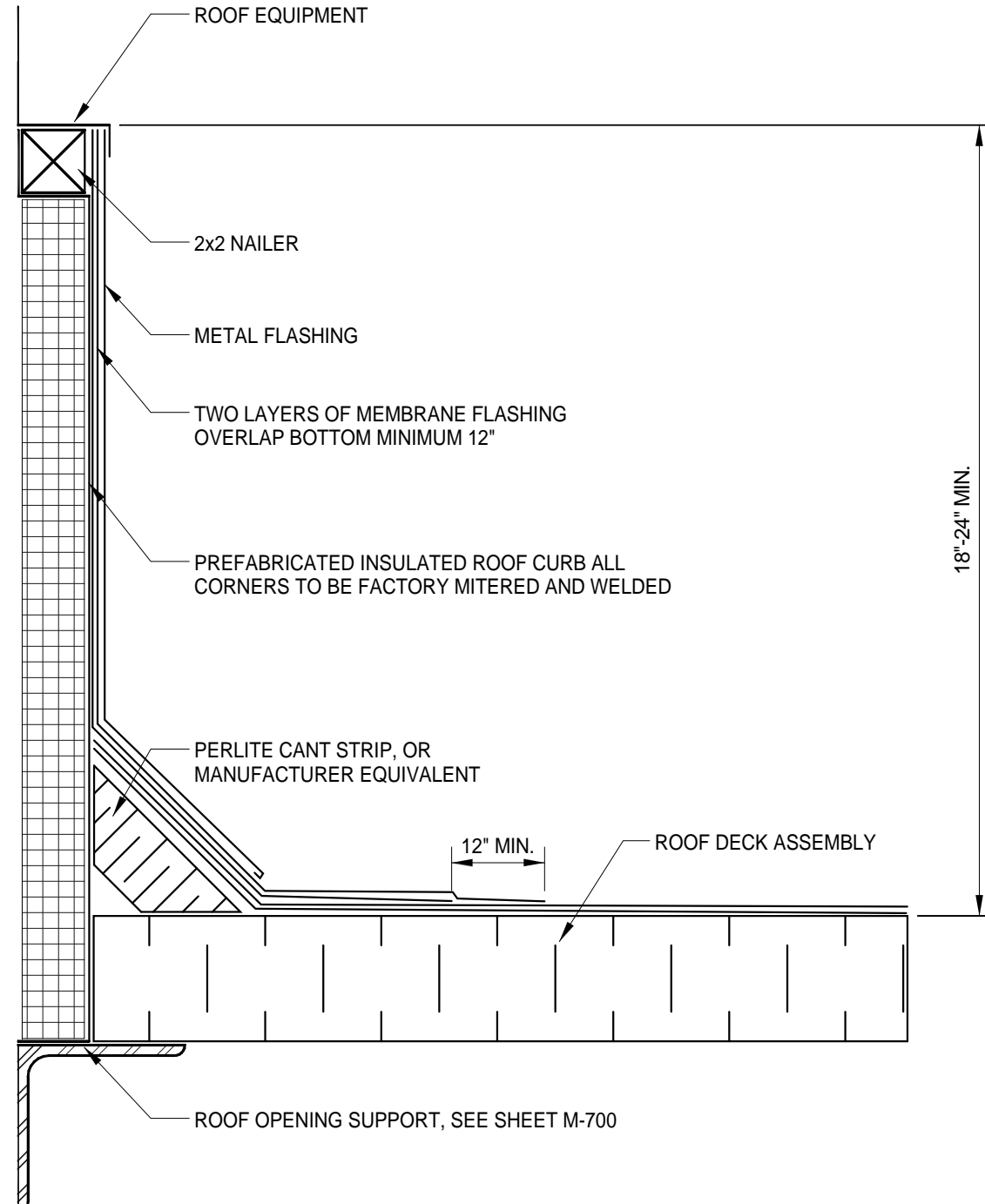
**NOTE:**  
TABULATED DATA FROM SMACNA ALLOWS FOR DUCT REINFORCING AND INSULATION, BUT NO EXTERNAL LOAD.

10 ROUND DUCT HANGERS  
N.T.S.

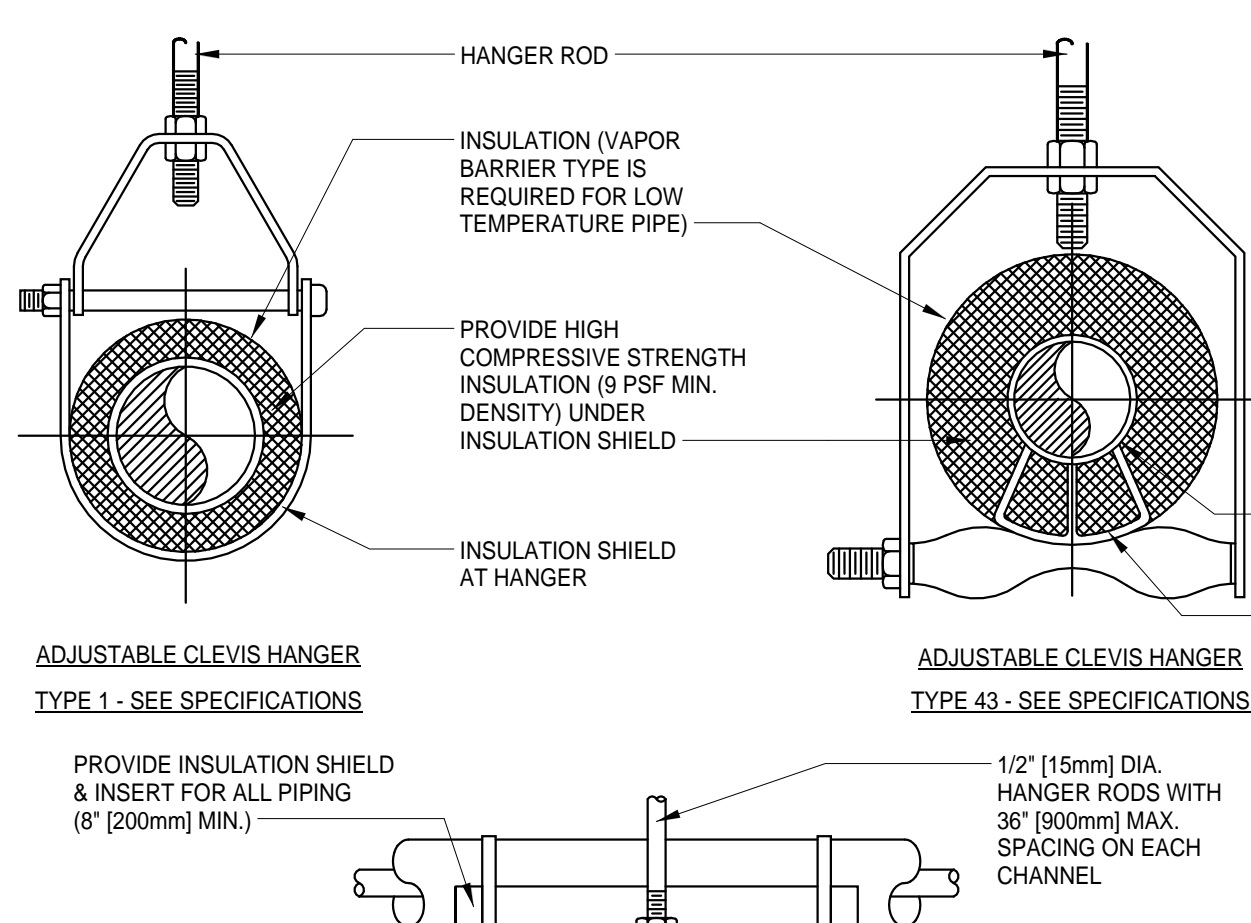


- NOTE:**
1. DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
  2. DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.

4 VOLUME DAMPER DETAIL  
N.T.S.



5 TYPICAL ROOF CURB DETAIL  
N.T.S.



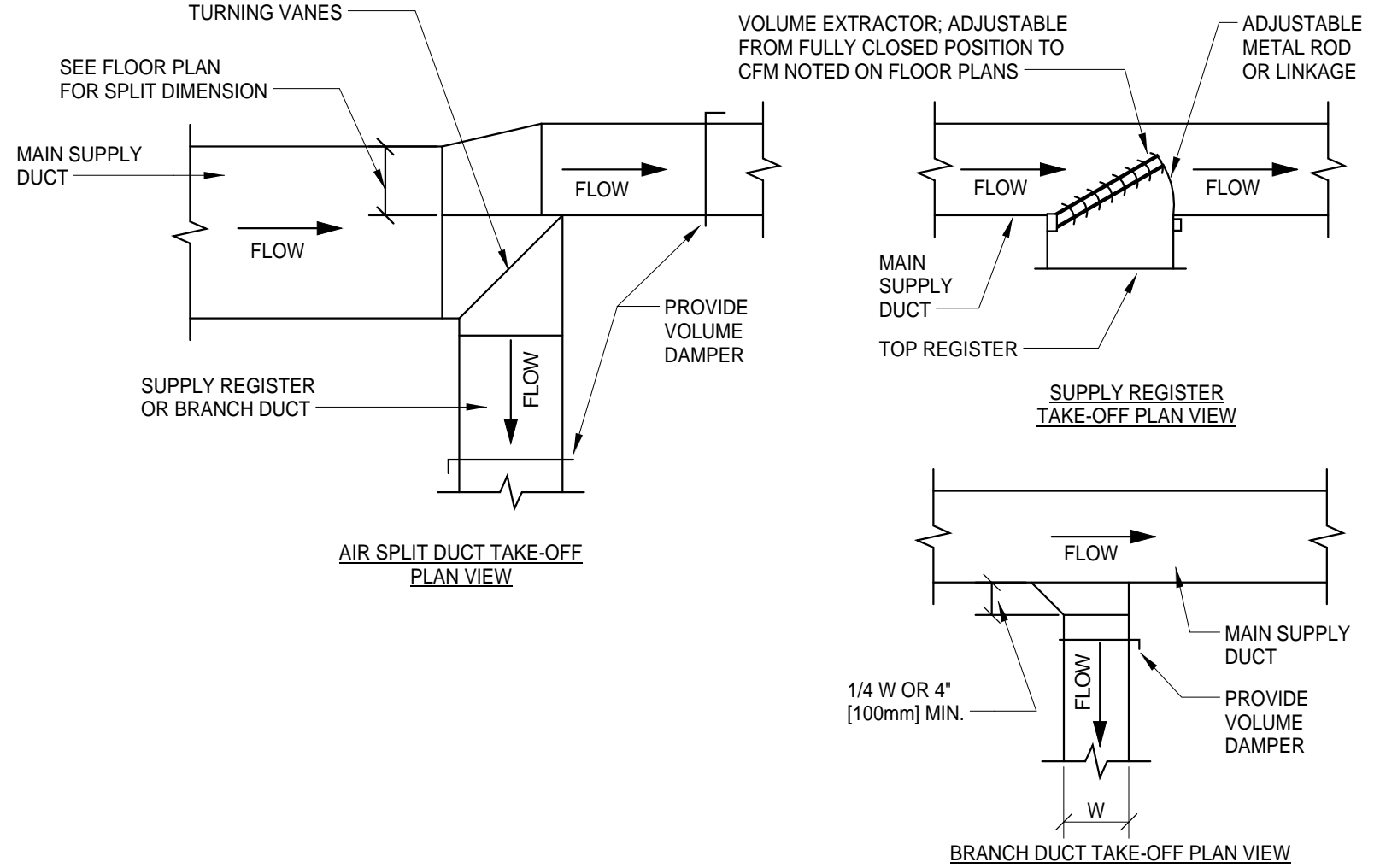
**NOTES:**  
SEE SPECIFIER FOR DETAILED HANGER REQUIREMENTS

SIDE VIEW TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.

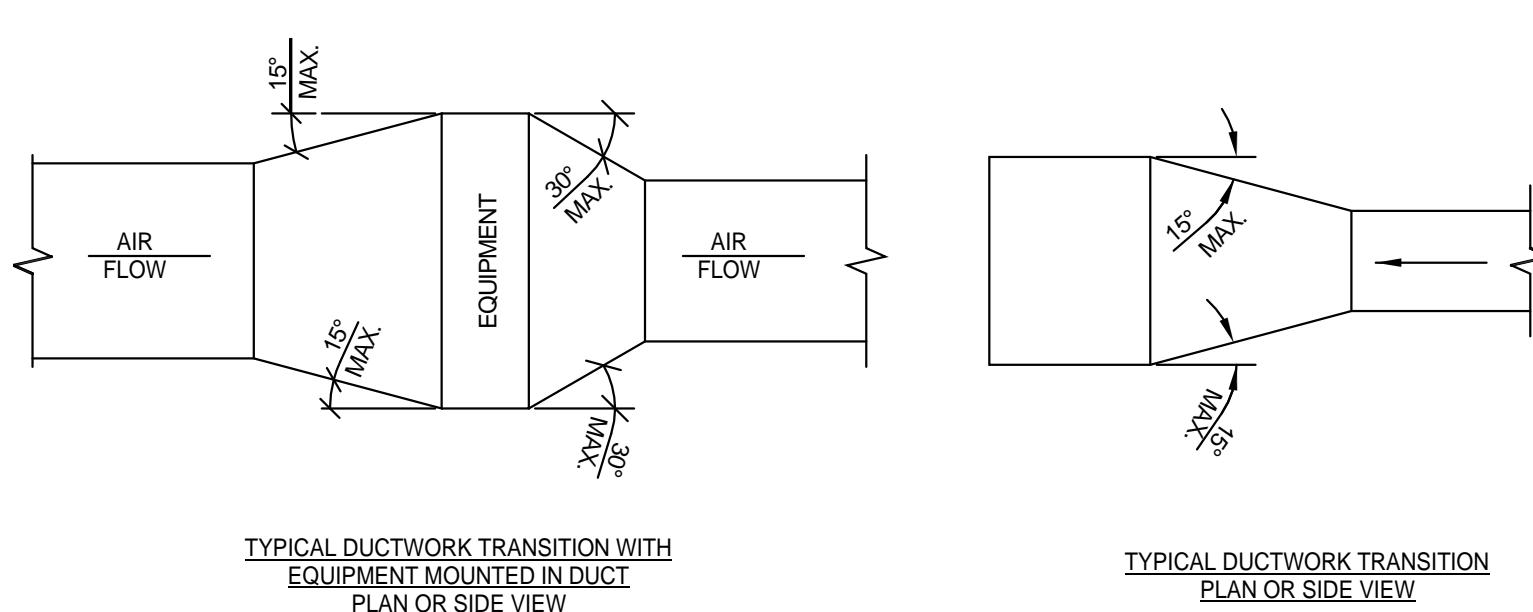
MAXIMUM PIPE/TUBING SUPPORT SPACING																							
NOM. SIZE	IN. [mm]	THRU 3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24				
PIPE	FT. [mm]	[2100]	[2100]	[2100]	[2700]	[3000]	[3400]	[3700]	[4100]	[4900]	[5200]	[5800]	[6700]	[7000]	[7600]	[8200]	[8600]	[9100]	[9600]				
TUBING	FT. [mm]	5 FT [1500]	[1800]	[2100]	[2400]	[2400]	[2700]	[3000]	[3700]	[4000]	[4100]	[4900]	-	-	-	-	-	-	-				

**NOTE:** FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.

6 PIPE HANGERS  
N.T.S.

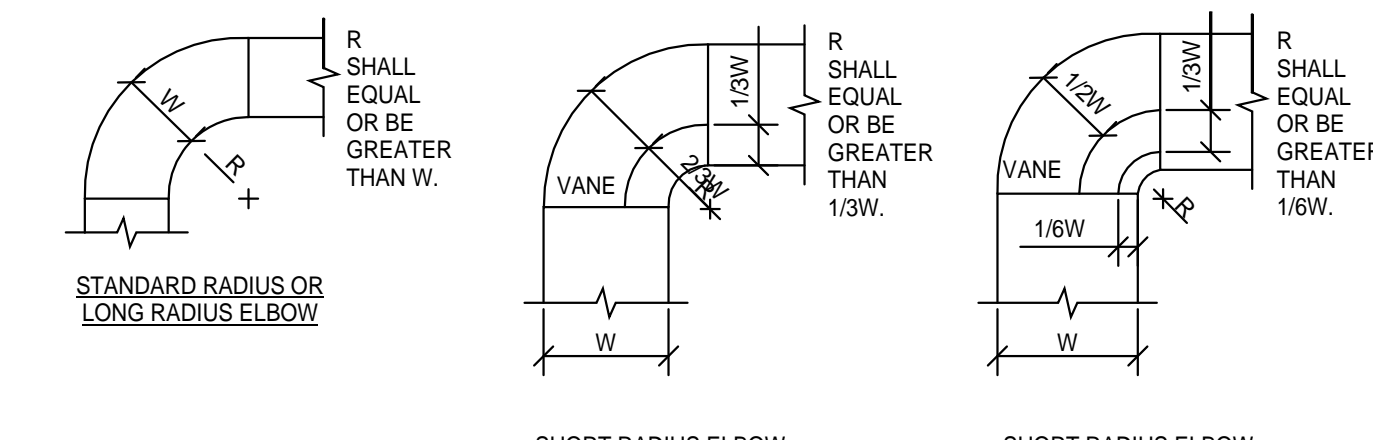


1 SUPPLY DUCTWORK TAKE-OFFS  
N.T.S.



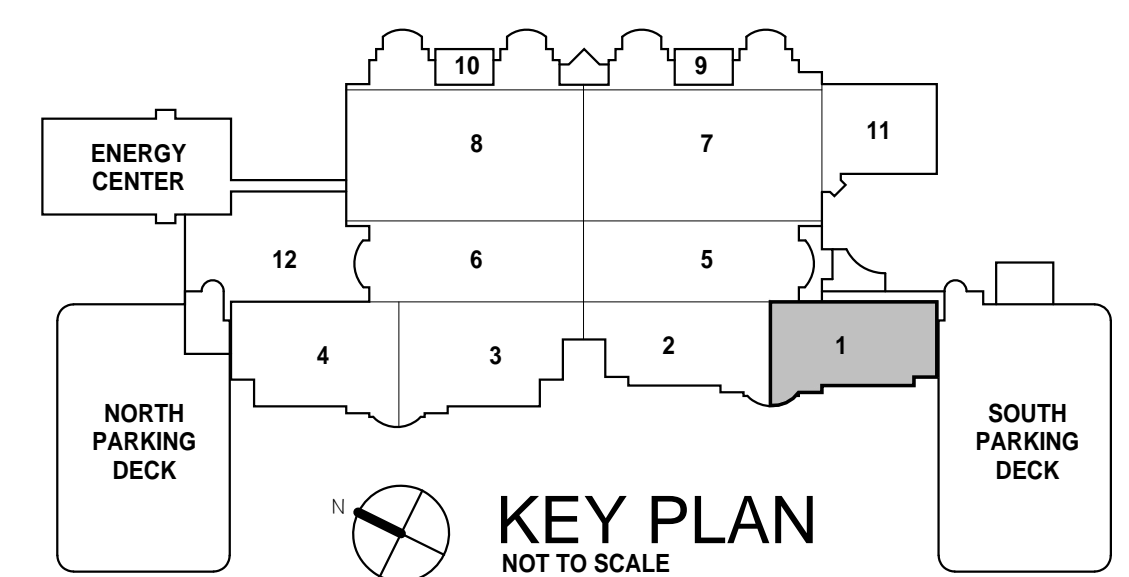
**NOTE:**  
UNLESS OTHERWISE INDICATED ON PLANS, MAXIMUM ANGLES SHOWN SHALL APPLY.

2 DUCTWORK TRANSITIONS (WITH EQUIPMENT MOUNTED IN DUCT)  
N.T.S.



- NOTE:**
1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND.
  2. ALL STANDARD RADIUS ELBOWS CAN BE SUBSTITUTED WITH SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

3 DUCTWORK RADIUS ELBOWS  
N.T.S.



1		
2		
3		
4		
5		
Revisions:		Date

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Drawing Title

**HVAC DETAILS**

Approved: Division Chief

Approved: Service Director

Project Title

**A3 SOUTH RENOVATION**

Building Number  
1

Checked  
EJR

Drawn  
JCW

Location  
4646 JOHN R. STREET  
DETROIT, MI 48201

Date  
12/16/2014

Project Number  
553-14-100

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**M-501**

Office of Facilities Management

Department of Veterans Affairs